

REMARKS

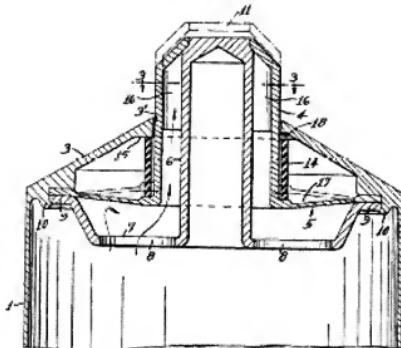
Reconsideration of this application and the rejection of claims 1-3 and 5-17 are respectfully requested. Applicants have attempted to address every objection and ground for rejection in the Office Action dated April 1, 2009 (Paper No. 20090327) and believe the application is now in condition for allowance. The claims have been amended to more clearly describe the present invention.

Claims 13-16 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite because the Examiner states that the phrase “the sterilization means” in claims 13-16 lacks a sufficient antecedent basis. Applicants have amended claim 13 to depend from claim 2 and claims 14-16 to depend from claim 13 to correct the antecedent basis issue. Applicants therefore request that the rejection of claims 13-16 under §112 be withdrawn.

Claims 1, 3 and 5-12 and 17 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 2,628,004 to T. F. Schlicksupp. Applicants disagree with and traverse this rejection for the following reasons.

Schlicksupp discloses a self-closing collapsible tube including a body portion 1 having a tapered wall 3 that defines a central opening 3'. The tube includes a plate or flange 7 having an upwardly extending post 6 and defines a pair of openings 8 that are on either side of the post. A sleeve-like member 4 is spaced from the plate 7 and includes an end portion that engages the end of the post 6. As shown in FIG. 2 below, when the tube is squeezed or pressure is otherwise applied to the body of the tube, the material inside the tube moves through the openings 8 and upwardly between the sleeve-like member 4 and the post 6.

FIG. 2

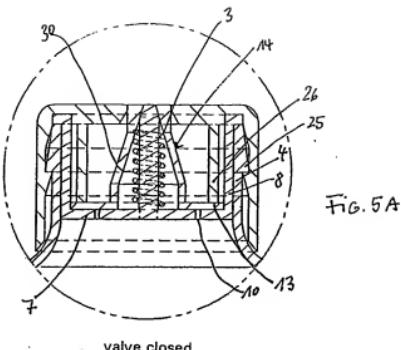


The pressure of the upwardly moving material causes the sleeve-like member 4 to move upwardly and away from the post so that the material can exit out of the outlet 11. Resilient tubing 14 is positioned on the diaphragm 5 of the sleeve-like member 4 to bias the diaphragm downward, which in turn, moves the sleeve-like member 4 back into engagement with the post 6 after pressure is released from the tube.

In contrast, amended claim 1 recites, among other things, a one-way valve for discharging a flowable material from a container that includes “an elastic seal which comprises an annular section seated on and covering said at least one through hole to prevent contaminants from entering the container through said at least one through hole, and a sleeve-like section which surrounds the projection at a radial distance with the exception of its end section” and “a

non-removable cap configured to enclose said valve seat and said seal and defining an exit opening, wherein when the one-way valve is in a closed state, said annular section is seated on said at least one through hole to prevent contaminants from entering the container through said at least one through hole and said end sections of said projection and said seal rest are positioned in said exit opening, and when the one-way valve is in an open state, said annular section moves away from said at least one through hole and said end section of said seal moves upwardly out of said exit opening to allow the material to pass through said at least one through hole and be discharged from said exit opening.” Schlicksupp fails to disclose such subject matter.

As shown in FIG. 5A of Applicants’ application below, the elastic seal includes an annular section 13 that is seated on and covers the through holes 10 defined by the valve seat 1. This prevents any microorganisms or other contaminants that may have entered through the exit opening while it was open from entering the inside of the container via the through holes 10. Schlicksupp, on the other hand, discloses a sleeve-like member 4 having a diaphragm 5 which is spaced from the openings 8.



Specifically as shown in FIG. 2 of Schlicksupp above, the diaphragm portions 5 of the sleeve-like member 4 are not seated on the openings 8 and therefore, the openings are always open (i.e., uncovered) so that contaminants can freely flow through the outlet 11 and the openings 8 into the tube. Furthermore, Schlicksupp does not disclose or suggest that the sleeve-like member 4 or any portion of it can be seated on the openings to cover them.

Furthermore, Schlicksupp fails to disclose a “non-removable cap” that is configured to enclose the valve seat and the seal. The Examiner contends that reference number 3 in Shclicksupp refers to the claimed non-removable cap. Applicants disagree. Reference number 3 refers to the tapered wall of the collapsible tube that is integrally formed with the body. The tapered wall 3 therefore does not enclose the valve seat and the seal as recited in amended claim 1. Further, Schlicksupp fails to disclose or suggest any component that functions as a cap.

Schlicksupp also fails to disclose an elastic seal. The Examiner contends that the sleeve-like member 4 discloses the elastic seal recited in amended claim 1. The sleeve-like member 4 in Schlicksupp, however, is not elastic. In particular, diaphragm 5 on the sleeve-like member 4 is thinned to form an annular recess 17 to give the sleeve-like member flexibility (Col. 3, line 74 to Col. 4, line 4). The fact that the diaphragm 5 must be thinned to give it greater flexibility means that the sleeve-like member 4 itself is not elastic.

Additionally, the upper or end sections 18, 19 of the elastic seal and the projection rest in the exit opening 27 when the valve is in a closed state (Fig. 5A above) and move upwardly out of the opening when the valve is in an open state (Fig. 5B). In contrast, the ends of the sleeve-like member 4 and the post 6 do not rest in the opening 3' of the tube when the tube is not being used. Instead, the ends of the sleeve-like member and post protrude above the opening 3' during use and when the tube is not being used.

For all of the above reasons, Applicants submit that amended claim 1, and the claims that depend therefrom, are each patentably distinguished over Schlicksupp and in condition for allowance.

Amended claim 17 includes similar subject matter to amended claim 1. Specifically, amended claim 17 recites, among other things, a one-way valve for discharging a flowable material that includes “a non-removable cap seated on a neck of the container and defining an exit opening that allows that flowable material to exit the container” and “an elastic seal including an annular section seated on and covering said at least one through hole to prevent contaminants from entering the container through said at least one through hole and a

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sleeve-like section which surrounds the projection at a radial distance with the exception of its end section which in the closed state of the one-way valve rests in the exit opening on the end section of the projection.” As stated above, Schlicksupp fails to disclose such subject matter. Applicants therefore submit that amended claim 17 is patentably distinguished over Schlicksupp and is in condition for allowance.

Claims 2 and 13-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Schlicksupp and U.S. Patent No; 5,490,938 to Sawan et al. Claims 2 and 13-16 depend from amended claim 1 and disclose a sterilization means that surrounds the projection of the valve seat. Sawan is cited to teach the sterilization element but does not remedy the deficiencies of Schlicksupp. Applicants therefore submit that claims 2 and 13-16 are patentably distinguished over the combination of Schlicksupp and Sawan for at least the reasons provided above with respect to amended claim 1 and for the further reasons that the cited combination fails to disclose or suggest the subject matter of claims 2 and 13-16 in combination with the subject matter of amended claim 1.

Applicants submit that in view of the above-identified amendments and remarks, the claims in their present form are patentably distinct over the art of record. Allowance of the

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rejected claims is respectfully requested. Should the Examiner discover there are remaining issues which may be resolved by a telephone interview, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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June 30, 2009

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